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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,436	09/25/2001	Romano Guermandi	7040.0001-01	8190

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4  
EXAMINER

MACKEY, JAMES P

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 06/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/961,436

Examiner

James Mackey

Applicant(s)

GUERMANDI, ROMANO

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 25 September 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 08/951,672.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Applicant should update the status of the parent application, including the patent number, at the beginning of the specification.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 16 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by McKissick et al. (U.S. Patent 3,735,791; Fig. 1).

McKissick et al. clearly teach a tire mold comprising a pair of axially opposite cheeks, a matrix interposed between the pair of cheeks, the matrix including a plurality of ribs which project in a raised configuration from a radial interior surface of the mold for forming a raised pattern in the tire tread band, wherein a sectional profile of the radial interior surface comprises two concave side portions 21 each having a center and a radius of curvature R2, and wherein ridges of the ribs in an area 20 between the two concave side portions define a radially inwardly convex surface tangent having a radius of curvature R1.

4. Claim 16 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mills et al. (U.S. Patent 3,693,690; Fig. 1).

Mills et al. clearly teach a tire mold comprising a pair of axially opposite cheeks, a matrix interposed between the pair of cheeks, the matrix including a plurality of ribs which project in a raised configuration from a radial interior surface of the mold for forming a raised pattern in the tire tread band, wherein a sectional profile of the radial interior surface comprises two concave side portions (at 32, 34) each having a center and a radius of curvature, and wherein ridges of the

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ribs in an area (at 30) between the two concave side portions define a radially inwardly convex surface tangent having a radius of curvature.

5. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brown (U.S. Patent 3,517,720; Figs. 3-4; col. 2, lines 24-31, col. 5, lines 33-50, and col. 6, lines 10-17; Tables I and II).

Brown clearly teaches a tire mold inherently comprising a pair of axially opposite cheeks and a matrix interposed between the pair of cheeks, the matrix including a plurality of ribs which project in a raised configuration from a radial interior surface of the mold for forming a raised pattern in the tire tread band (as clearly shown in the tire product of Figs. 2 and 5), wherein a sectional profile of the radial interior surface comprises two concave side portions 30 each having a center and a radius of curvature  $r_2$  within the claimed range (claim 17), and wherein ridges of the ribs in an area between the two concave side portions define a radially inwardly convex surface tangent having a radius of curvature  $r_1$ .

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of McKissick et al. (U.S. Patent 3,735,791; Fig. 1), Mills et al. (U.S. Patent 3,693,690; Fig. 1) and Brown (U.S. Patent 3,517,720; Figs. 3-4; col. 2, lines 24-31, col. 5, lines 33-50, and col. 6, lines 10-17; Tables I and II).

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Each of McKissick et al., Mills et al. and Brown teaches a tire mold substantially as claimed, as described above. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify any one of McKissick et al., Mills et al. and Brown by providing the radius of curvature of the convex surface tangent and the radius of curvature of the concave side portions as being within the broadly claimed ranges in order to vulcanize a tire having the desired surface contours. Note that a change in size is generally recognized as being within the level of ordinary skill in the art, *In re Rose*, 105 USPQ 237 (CCPA 1955).

8. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of McKissick et al. (U.S. Patent 3,735,791; Fig. 1), Mills et al. (U.S. Patent 3,693,690; Fig. 1) and Brown (U.S. Patent 3,517,720; Figs. 3-4; col. 2, lines 24-31, col. 5, lines 33-50, and col. 6, lines 10-17; Tables I and II), in view of any one of Takigawa et al. (U.S. Patent 4,345,632; Fig. 2; col. 5, lines 25-48), Kinoshita et al. (U.S. Patent 5,417,269 ; Figs. 1-3), Pfeiffer et al. (U.S. Patent 4,687,037; Fig. 1) and Suzuki et al. (U.S. Patent 5,375,639; Figs. 1-2; col. 3, lines 4-61).

Each of McKissick et al., Mills et al. and Brown teaches a tire mold substantially as claimed, as described above. McKissick et al., Mills et al. and Brown do not disclose a central rib on an equatorial plane of the mold, the rib including a circumferential depression. Each of Takigawa et al., Kinoshita et al., Pfeiffer et al. and Suzuki et al. disclose a tire mold having a tread matrix portion including a central rib centered on an equatorial plane of the mold for forming a central circumferential groove in the tire, wherein the central rib includes a circumferential depression centered on the equatorial plane of the mold, and wherein the ratio of the height of the central rib and depth of the circumferential depression is within the claimed range (claim 21). It would have been obvious to one of ordinary skill in the art at the time of the

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invention to modify any one of McKissick et al., Mills et al. and Brown by providing the mold tread matrix with a well known and conventional central rib in order to produce a well known and conventional circumferential groove in the tire tread for improving wet traction. It would have been further obvious to a skilled artisan to have provided such a central rib with a circumferential depression for forming a raised rib in the circumferential groove of the tire tread, as disclosed in any one of Takigawa et al., Kinoshita et al., Pfeiffer et al. and Suzuki et al., in order to facilitate removal of pebbles from the circumferential groove, or in order to minimize undesired deformation of the tire carcass due to a relatively wide circumferential groove (as disclosed in Pfeiffer et al.), or in order to absorb excess rubber in the circumferential groove during vulcanization and thereby avoid undesired corrugated deformation of the tire belt layer during vulcanization (as disclosed in Suzuki et al.).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Verdier (U.S. Patent 3,682,220; Fig. 4) and Glover et al. (U.S. Patent 5,386,862; Fig. 8) each discloses a tire having a circumferential groove with a raised rib. Landers (U.S. Patent 4,700,762; Fig. 2) and Hammond et al. (U.S. Patent 5,685,927) each discloses a tire having a circumferential groove.

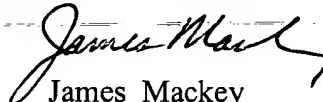
10. Note that, while an Information Disclosure Statement was filed with the application, a listing of the documents on a Form PTO-1449 was apparently inadvertently omitted, and thus the cited documents have not been made of record in this application (except to the extent that such documents have been cited by the Examiner on the attached Form PTO-892).

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 703-308-1195. The examiner can normally be reached on M-F, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



James Mackey  
Primary Examiner  
Art Unit 1722

6/22/03

jpm  
June 22, 2003